



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Henryk LUBON et al.

Serial No.: 08/982,284

Group Art Unit: 1632

Filed: December 1, 1997

Examiner: Hauda, K.

For: METHODS FOR THE DEGRADATION AND DETOXIFICATION OF
ORGANIC MATERIAL USING URINE PRODUCED BY TRANSGENIC
ANIMALS AND RELATED TRANSGENIC ANIMALS AND PROTEINS

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MAY 02 2001

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DECLARATION OF WILLIAM VELANDER
REGARDING ASSIGNMENT DOCUMENTATION

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

I, William Velander, a named inventor in this application, hereby declare that:

1. At all times from the date of invention for the above-referenced application to the present, I have been employed by Virginia Polytechnic Institute and State University ("Virginia Tech"), where I presently am a professor.

2. The invention of this application was made within the scope of my assigned duties as a professor at Virginia Tech.

3. It is my understanding that Virginia Tech, and through it, VTIP, Inc. ("VTIP"), by virtue of my contribution to the invention of this application own at least a part of this application. It is my understanding that American Red Cross owns a part of this application by virtue of the contribution to the invention of this application by other named inventors.

4. It is my understanding that Virginia state law, namely Va. Code Ann. Section 23-4.4 (2000) ("Authorization to transfer interest; Governor's approval required under certain circumstances"), provides:

"The Boards of Visitors, the State Board for Community Colleges, or their designees may transfer any interest they possess in patents and copyrights or in materials in which the institution claims an interest under its patent or copyright policy. However, the Governor's prior written approval shall be required for transfers of such property developed wholly or significantly through the use of state general funds and either (i) such property was developed by an employee of the institution acting within the scope of his assigned duties, or (ii) such property is to be transferred to an entity other than the Innovative Technology Authority, an entity whose purpose is to manage intellectual properties on behalf of nonprofit organizations, colleges and universities, or an entity whose purpose is to benefit the respective institutions. The Governor may attach conditions to these transfers as he deems necessary. In the event the Governor does not approve such transfer, the materials shall remain the property of the respective institutions and may be used and developed in any manner permitted by law. The State Council of Higher Education working in cooperation with the state-supported institutions of higher education and in accordance with 23-9.10:4 shall adopt a uniform statement defining (i) the conditions under which a significant use of general funds occurs and (ii) the circumstances constituting an assigned duty." (Emphasis added.)

4. I further have reviewed and read the "Virginia Polytechnic Institute and State University *Policy and Procedures*" No. 13,000 dated December 2, 1991 which applied to me, a copy of which is attached hereto. Referring to the university policy, my invention herein was made within my assigned duties. Particularly, in section 2.4, the policy divides intellectual property into two groups, first, "traditional results of academic scholarship, i.e. textbooks, literary works, artistic creations and artifacts", and second, "novel results of research such as products, processes, machines, software, biological technology, etc.". The university policy states that, "[i]n the second group, the strong presumption of ownership is to the university (with the originator having a right to share in the benefits derived therefrom)." The university policy next states:

"Thus unless there is convincing and explicit evidence that the IP was developed without the use of university resources and/or facilities (which may include but is not limited to any of the following: use of equipment, lab or office space, university time of originator and/or personnel under his/her control, funds supplied by the university and/or funds originating from sponsored research projects and/or donations to university/affiliated companies, etc.) ownership of the

IP rests with the university and the originator(s) are obliged to sign the appropriate legal assignment documents upon request.” (University policy, page 4.)

5. I further have reviewed and read the “Virginia Polytechnic Institute and State University *Policy and Procedures*” No. 13,000 dated August 31, 1999 which was the next revision of the 1991 university policy discussed above, and currently in force. The 1999 university policy applied and continues to apply to me. A copy is attached hereto. Referring to the university policy for definition of “assigned duties”, my invention herein was made within my assigned duties. Namely, section 2.4 of the policy still divides intellectual property into two groups, with the second being “novel results of research such as products, processes, machines, software, biological technology, etc.”. The university policy, as before, still states that, “[i]n the second group, the strong presumption of ownership is to the university (with the originator having a right to share in the benefits derived therefrom).” The university policy continues to state, as before,

“Thus unless there is convincing and explicit evidence that the IP was developed without the use of university resources and/or facilities (which may include but is not limited to any of the following: use of equipment, lab or office space, university time of originator and/or personnel under his/her control, funds supplied by the university and/or funds originating from sponsored research projects and/or donations to university/affiliated companies, etc.) ownership of the IP rests with the university and the originator(s) are obliged to sign the appropriate legal assignment documents upon request.”

6. During the last few years I have worked closely with my American Red Cross co-inventors and on occasion we together have executed papers. In such a context of executing documents as a group, I believe that I may have executed an assignment document naming American Red Cross as the assignee for the above application and the invention therein, although, if so, I do not have a copy of such an assignment document. If I did execute such an assignment document naming American Red Cross as the assignee, I understand such a document to be erroneous and not a correct documentation of the actual ownership of my interest in the present application, namely, the ownership interest of my university. I am executing, or have executed, herewith an assignment naming Virginia Polytechnic Institute and State University as the assignee

(which in turn will assign to VTIP, Inc.) to properly document the ownership-in-fact of my interest in the above-named application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated:

April 25 2001 By: 
William Velander

Subject: Policy on Intellectual Properties

1.0 Purpose

Publicly (state) supported universities have the multiple missions of teaching, research, support of the public interest and fostering of economic development of the area/state in which they are located.

Scholarly activities in a university setting create Intellectual Properties (IPs). IPs include research papers, books, software programs, new inventions, journal articles, etc.

The university's mission includes dissemination of IPs in the most efficient and effective manner possible. The identification and optimization of opportunities for the industrial/commercial utilization of some IPs is also part of this mission, as is the protection of the ownership rights of both the individuals and the university.

While many IPs are best disseminated by publication and placing in the public domain, there are a significant number that are most effectively handled by protection under the IP laws (i.e. patenting and copyright) and licensing (or other transfer) to private sector entities, with attendant financial considerations.

This Policy is designed to establish the rationale and the mechanisms to:

1. Establish ownership criteria and resolve ownership questions if such arise.
2. Define the responsibilities, rights and privileges of those involved.
3. Develop basic guidelines for the administration of the IP Policy.

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2.0 Policy

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2.1 Organization

The Intellectual Properties Committee shall be chaired by the Associate Provost for Research and have the following membership:

1. Twelve at-large members of the Faculty/Staff
2. One member representing the Staff Senate
3. One member representing the Graduate Student Assembly
4. One member representing the Student Government Association
5. The Vice Provost for Research and Dean of the Graduate School (ex-officio)
6. A Vice President of VPI&SU (ex-officio)
7. A representative from the office of the General Counsel of VPI&SU (ex-officio)
8. Intellectual Properties Manager of VPI&SU (ex-officio)

(IPC Chair and ex-officio members may choose ad-hoc or permanent designees.)

A. Qualifications:

At-large IPC members shall have professional background and expertise spanning the university's fields of endeavor, experience in patent and copyright matters, experience and interest in the economic/marketing aspects of technology transfer and personal contacts which they can draw on to assess technico-economic merit of individual IPs.

Individually each IPC member should have the following characteristics:

1. Background and experience to contribute to at least two of the areas outlined above.
2. Desire to be involved with matters relating to IP utilization.
3. Willingness to devote at least 6-10 hours per month to IPC matters.

B. Nominations/Selection:

1. At-Large Members:

The Commission on Research in consultation with the Faculty Senate shall solicit nominations of qualified individuals from multiple sources (i.e. individual Faculty members, Department Heads, Deans, University Administration, Commissions, Faculty Senate, etc.), endorsed by pertinent Department Head(s) and approved by pertinent Dean, and shall prepare a slate of nominees (at least equal to twice the vacancies and representing all colleges of the university).

2. Staff, GSA, SGA Representatives:

Each organization shall nominate at least two individuals for each position.

C. Appointment:

The President shall make all appointments. All at-large terms are for three years. Staggered terms to assure continuity are desirable. Staff Senate, GSA, and SGA representatives are appointed for one year terms. All members may be reappointed. Interim appointments to serve incompletely completed terms shall be upon recommendation of IPC Chair in consultation with IPC membership.

2.2 Authority and Responsibility of the Committee

The IPC shall have the following authority and responsibility with respect to Intellectual Property:

- A. To develop and recommend university policy and policy changes dealing with IP to the Commission on Research.
- B. To review all invention disclosures submitted by VPI&SU faculty, staff and/or students for:
 - I. Complete and appropriate disclosure of individuals involved in the invention and/or creation of the IP.

2. Determination of IP ownership by university, originating individuals, research sponsors and/or governmental agencies.
 3. Examination and recommendation to the Provost for disposition of (1) and/or (2) above in those cases where a dispute exists.
 4. Coordination of evaluation and recommendation to Virginia Tech Intellectual Properties, Inc. (VTIP) of technical merit, economic potential and protection/marketing priority.
- C. To make recommendations to the Provost for the sharing of royalties between the university and the authors or inventor(s) of the IPs owned by the university.
- D. To promulgate such guidelines and procedures as may be necessary for the implementation of this Policy.

2.3 IPC Working Groups

In order to effectively discharge its responsibilities, the IPC will establish the following working groups:

- A. Ownership Review Group: This group shall be composed of the staff, GSA, SGA representatives and three at-large members of the IPC (selected by the IPC Chair and serving for a one year term) and chaired by the IP Manager. The group shall meet on a regular basis (monthly as needed) with the following agenda:
 1. Review all disclosures submitted.
 2. Confirm university ownership for those disclosures in which originator(s) have indicated VPI&SU ownership.
 3. Review that sponsor ownership/rights have been ascertained and cleared.
 4. Review, discuss and reach preliminary conclusions on those disclosures in which originators claim ownership, forward disclosure/recommendation to full IPC.
 5. Assign each disclosure to a presenter for evaluation and review at a subsequent meeting of the Evaluation Coordination Board.
- B. Evaluation Coordination Board: This group shall consist of the full membership of the IPC and be responsible for advising the IP Manager as to:
 1. The technical merit of the disclosure.
 2. The market/economic potential of the IP.
 3. The novelty/nonobviousness (i.e. patentability) of the invention (if applicable).
 4. The priority of undertaking protection/marketing.
- C. Inventorship Review Group: This group, composed of three members of the IPC (appointed ad-hoc by the Chair of the IPC) and chaired by the Vice Provost for Research and Dean of the Graduate School shall be convened when required by the existence of an inventorship/authorship disagreement concerning a given disclosure;

such disagreement having been brought to the attention of the IPC Chair by any member of the faculty, staff, student body or administration of VPI&SU.

It will be the responsibility of the IRG to gather all available facts from all concerned with the IP and, after appropriate analysis, attempt to mediate a resolution of the conflict satisfactory to all concerned. Failing that, the IRG shall provide the IPC with a compendium of the background, a summary of the conclusions and a preliminary set of recommended solutions, for their deliberation and formulation of recommendations to the Provost.

2.4 Policy Guidelines

This section outlines the criteria to be used by the IPC and its working groups in their deliberations, findings and recommendations. To the extent that individual questions are not specifically addressed, these guidelines will, at the least, give a general indication of intent and philosophy and allow proper interpretation.

A. Ownership of IPs

For purposes of this policy creations are divided into two groups:

1. The traditional results of academic scholarship, i.e. textbooks, literary works, artistic creations and artifacts.
2. The novel results of research such as products, processes, machines, software, biological technology, etc.

Intellectual properties in the first (traditional) group are considered to make their full contribution to the university's benefit by their creation and by continued use by the university in teaching, further development, and enhancement of the university's academic stature; the presumption of ownership is to the author(s). Thus, unless there is explicit evidence that the work was specifically commissioned by the university, the IP rights remain with the author(s) and the university rights are limited to free (no cost) use in teaching, research, extension, etc. in perpetuity.

In the second group, the strong presumption of ownership is to the university (with the originator having a right to share in the benefits derived therefrom). Thus unless there is convincing and explicit evidence that the IP was developed without the use of university resources and/or facilities (which may include but is not limited to any of the following: use of equipment, lab or office space, university time of originator and/or personnel under his/her control, funds supplied by the university and/or funds originating from sponsored research projects and/or donations to university/affiliated companies, etc.) ownership of the IP rests with the university and the originator(s) are obliged to sign the appropriate legal assignment documents upon request.

Within the above general guidelines, the following situations are more specifically defined:

1. Sponsor Rights: In the case in which an IP is generated as a result of research funded by a private sector company under a sponsored research project, the IP rights of the sponsor as defined in the applicable clauses ("Patents & Copyrights," "Intellectual Properties," "Inventions," etc.) of the Sponsored Re-

search Agreement (as approved by the Associate Provost for Research and signed by an authorized officer of the university) shall take precedence over the rights of the university/inventor(s). Any residual rights not accruing to the sponsor shall be as defined in the general guidelines above.

2. Federal Agency Rights: Research projects sponsored by an agency of the federal government have statutory IP rights that are limited (in almost all cases) to a non-exclusive non-transferrable royalty-free license to any patent generated by the research, provided the inventor(s)/university advise the agency in a timely manner of their intent to retain their rights and provide for legal protection (i.e. patenting). It is the responsibility of the researcher to advise the agency of the creation of the IP and (with the assistance of the university IP manager) advise of the protection steps being undertaken. The residual rights not belonging to the sponsoring agency shall be as defined in the general guidelines above.
3. Student Ownership: Ownership of IPs developed by students who are also employees of the university will be determined by the rules which apply to all university employees.

IPs generated by students not employed by the university and not using university resources of at least \$10,000 in their generation will be owned by the student but subject to any applicable prior rights of private sector or government sponsors and to the right of the university to use the IP internally at no cost.

4. Joint Inventorship: For IPs generated by a team of inventors in which one or more are not members of the faculty/staff/supported students, each inventor is usually entitled (by law) to shared ownership of the entire right. The university's claim to the shares of university-associated inventors will be as outlined in these guidelines. Ownership of outside inventors will vest in them or their assignees.
5. Special Situations: In the event that an IP ownership situation arises which is not addressed in either the general or specific guidelines outlined above, the IPC shall make a recommendation based on the spirit of the guidelines. A record of the rationale used to arrive at their recommendation shall be kept and used as a precedent for the handling of future Special Situations if applicable.

B. Obligation to Disclose:

While it is recognized that faculty mission and expertise is concentrated and directed in areas other than commercial utilization, originators of new technology are strongly encouraged to err on the side of submitting a disclosure when doubt as to its commercial potential exists in their mind. Timely (i.e. before publication or other enabling non-confidential disclosure) submission of a disclosure to the university may also be critical to the value of the IP and is strongly encouraged.

To the extent (and as soon as) the researcher/inventor/creator obtains research results that may be considered an IP and recognizes that they may have potential for commercial utilization there exists an obligation to bring these results to the attention of the university in the form of a disclosure.

If, in the absence of a timely disclosure, commercial utilization of a technology takes place with the direct or indirect involvement of the originator(s) but without in-

volvement by the university it will be deemed that the originator(s) have not fulfilled their obligation to disclose and the university may:

1. Take whatever legal and/or business action is indicated to protects its rights and rightful share of financial benefits.
2. Deny to originator(s) any share of revenues which would otherwise accrue to them under this policy.

C. Revenue Sharing:

Revenues generated by the successful commercialization of IPs owned by the university (whether or not protected by patent and/or copyright) shall be shared equally between the university and the originator(s) of the IP, subject to the conditions and exceptions outlined below.

1. Revenues subject to sharing include royalties, licensing fees, incentives, etc. received by the assignee licensor organization, less the costs/expenses described below. Specifically excepted from sharing are payments received and designated for specific purposes such as sponsored or unrestricted research grants, services to the university, research equipment and/or materials, consulting fees to researchers, etc. These payments will go directly to the designated entity and purpose.

2. Also excepted from sharing are revenues resulting from:

- A. Tasks and/or activities specifically and explicitly assigned to employees by an administrative unit of the university, or
- B. Activities and/or tasks clearly defined in the written, university approved, policy of an administrative unit of the university.

Such revenues, flowing through the university assignee organization, will accrue to the originating administrative unit of the university net of development costs.

3. Expenses to be subtracted from gross revenue before sharing shall be limited to documented direct and indirect costs for protection (patenting), marketing and development of the IP.

Specifically excluded are costs incurred in the generation of the IP (i.e. research costs). Development costs shall include (but not be limited to) payments made to (or retained by) non-affiliated organizations (e.g. Research Corp. Technologies, CIT, etc.) involved in the process of commercializing the IPs owned by the university.

4. Non-cash compensation for rights to an IP may be accepted but only with the informed consent of the originator(s) of the IP.

5. The share of net revenue not paid to the originator(s) (50 percent) shall be applied as follows:

- A. A portion equivalent to at least 10 percent of total net revenue may be distributed to the originator(s)' primary unit(s) (c.g. Departments, Centers, etc.).

- B. The remainder to the university assignee organization (VTIP).
- D. Management Responsibility:

Virginia Tech Intellectual Properties, Inc. (VTIP), a non-profit corporation affiliated with the university has been established and charged with the mission of protecting and utilizing IPs for the benefit of the university.

All IPs assigned to the university shall flow to VTIP by assignment for operational management. The IPC (through its Evaluation Coordination Board) should make appropriate inputs and recommendations as to disposition and priority of individual IPs. Originator(s)' inputs/suggestions to VTIP are also appreciated.

E. Right Of Appeal:

The originator(s) of an IP covered by this Policy shall have the right to appeal application of the policy to the IPC.

The IPC will formulate recommendations relative to each such appeal, and will forward both the appeal and its recommendations to the Office of the Senior Vice President and Provost in a timely manner. The Provost will determine the university's response to each appeal, and will so notify the originator(s) and the IPC.

If the originator(s) disagree with the IPC recommendation regarding ownership, a written appeal to the Provost must be filed within (30) thirty days of receipt of notification of the IPC recommendation. This appeal should contain an exposition of the facts as seen by the originator(s), any information they deem pertinent to the case, as well as any applicable citations of policy guidelines. A copy of the appeal document should be sent to the IPC via its Chair.

Upon receipt of the appeal, the Provost may elect to consult with any and all concerned prior to reaching a decision in the case.

In the event that any member of the university (faculty, staff or student) perceives and/or becomes aware of any irregularity in the inventorship/authorship of an IP disclosed (or about to be disclosed) to the IPC he/she should bring it to the attention of the other inventors/authors involved and/or the Department Chair(s) concerned in an attempt to resolve the conflict equitably and amicably. Failing such resolution, the facts of the cases should be submitted in writing within (30) thirty days to the Vice Provost for Research and Dean of the Graduate School (with copy to the Chair of the IPC) with a request for review by the Inventorship Review Group of the IPC.

Upon receipt of such a request, the IRG shall review the facts of the case, convene a hearing for all concerned parties, reach a conclusion and present a synopsis of the case and a recommendation to the full IPC who will, in turn, make a recommendation to the Provost.

3.0 Procedures

4.0 Definitions

5.0 References

Policy Memorandum No. 73, "Policy on Intellectual Properties," issued March 4, 1987

Policy Memorandum No. 121, "Policy on Intellectual Properties," issued December 9, 1991

6.0 Approvals and Revisions

- Revision 0
 - Approved by University Council: November 17, 1986
 - Approved by the President: November 17, 1986
 - Approved by Board of Visitors: December 5, 1986
- Revision 1
 - Approved by University Council: December 2, 1991
 - Approved by the President: December 2, 1991

Signature

Date

Policy 13000: Policy on Intellectual Properties

No. 13000

Subject: Policy on Intellectual Properties

Rev.: 2

Virginia Polytechnic Institute and State University

Policy and Procedures

Date: August 31, 1999

- 1. Purpose
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 - 2.2 Authority and Responsibility of the Committee
 - 2.3 IPC Working Groups
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 - 4. Definitions
 - 5. References
 - 6. Approval and Revisions
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1. Purpose

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The university's mission includes dissemination of IPs in the most efficient and effective manner possible. The identification and optimization of opportunities for the industrial/commercial utilization of some IPs is also part of this mission, as is the protection of the ownership rights of both the individuals and the university.

While many IPs are best disseminated by publication and placing in the public domain, there are a significant number that are most effectively handled by protection under the IP laws (i.e., patenting and copyright) and licensing (or other transfer) to private sector entities, with attendant financial considerations.

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1. Establish ownership criteria and resolve ownership questions if such arise.
2. Define the responsibilities, rights and privileges of those involved.
3. Develop basic guidelines for the administration of the IP Policy.

2. Policy

2.1 Organization

The Intellectual Properties Committee shall be chaired by the Associate Provost for Program Development and have the following membership:

1. The Vice Provost for Research and Dean of the Graduate School (also representing the Commission on Research);
2. Associate Provost for Program Development;
3. Director of Business Affairs and Controller, Virginia Tech Foundation, Inc.;
4. The Associate General Counsel;
5. The Executive Vice President of Virginia Tech Intellectual Properties;
6. Nine at-large members of the faculty-A/P faculty-staff (with patent and copyright experience) nominated by the Associate Provost for Research in conjunction with the presidents of the Faculty and Staff Senates and the chair of the Commission on Administrative and Professional Faculty Affairs (three-year term) (one must be an A/P faculty member and one must be a classified staff employee).

(IPC Chair and ex-officio members may choose ad-hoc or permanent designees.)

A. Qualifications:

At-large IPC members shall have professional background and expertise spanning the university's fields of endeavor, experience in patent and copyright matters, experience and interest in the economic/marketing aspects of technology transfer and personal contacts that they can draw on to assess technico-economic merit of individual IPs.

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2. Staff, GSA, SGA Representatives: Each organization shall nominate at least two individuals for each position.

C. Appointment:

The President shall make all appointments. All at-large terms are for three years. Staggered terms to assure continuity are desirable. Staff Senate, GSA, and SGA representatives are appointed for one-year terms. All members may be reappointed. Interim appointments to serve incomplete terms shall be upon recommendation of IPC Chair in consultation with IPC membership.

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- B. To review all invention disclosures submitted by VPI&SU faculty, staff and/or students for:
 - 1. Complete and appropriate disclosure of individuals involved in the invention and/or creation of the IP.
 - 2. Determination of IP ownership by university, originating individuals, research sponsors and/or governmental agencies.
 - 3. Examination and recommendation to the Provost for disposition of (1) and/or (2) above in those cases where a dispute exists.
 - 4. Coordination of evaluation and recommendation to Virginia Tech Intellectual Properties, Inc. (VTIP) of technical merit, economic potential and protection/marketing priority.
- C. To make recommendations to the Provost for the sharing of royalties between the university and the authors or inventor(s) of the IPs owned by the university.
- D. To promulgate such guidelines and procedures as may be necessary for the implementation of this Policy.

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 - 1. Review all disclosures submitted.
 - 2. Confirm university ownership for those disclosures in which originator(s) have indicated VPI&SU ownership.
 - 3. Review that sponsor ownership/rights have been ascertained and cleared.
 - 4. Review, discuss and reach preliminary conclusions on those disclosures in which originators claim ownership, forward disclosure/recommendation to full IPC.
 - 5. Assign each disclosure to a presenter for evaluation and review at a subsequent meeting of the Evaluation Coordination Board.
- B. **Evaluation Coordination Board:** This group shall consist of the full membership of the IPC and be responsible for advising the IP Manager as to:
 - 1. The technical merit of the disclosure.
 - 2. The market/economic potential of the IP.
 - 3. The novelty/nonobviousness (i.e., patentability) of the invention (if applicable).
 - 4. The priority of undertaking protection/marketing.
- C. **Inventorship Review Group:** This group, composed of three members of the IPC (appointed ad-hoc by the Chair of the IPC) and chaired by the Vice Provost for Research and Dean of the

Graduate School shall be convened when required by the existence of an inventorship/authorship disagreement concerning a given disclosure; such disagreement having been brought to the attention of the IPC Chair by any member of the faculty, staff, student body or administration of VPI&SU.

It will be the responsibility of the IRG to gather all available facts from all concerned with the IP and, after appropriate analysis, attempt to mediate a resolution of the conflict satisfactory to all concerned. Failing that, the IRG shall provide the IPC with a compendium of the background, a summary of the conclusions and a preliminary set of recommended solutions, for their deliberation and formulation of recommendations to the Provost.

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1. The traditional results of academic scholarship, i.e. textbooks, literary works, artistic creations and artifacts.
2. The novel results of research such as products, processes, machines, software, biological technology, etc.

Intellectual properties in the first (traditional) group are considered to make their full contribution to the university's benefit by their creation and by continued use by the university in teaching, further development, and enhancement of the university's academic stature; the presumption of ownership is to the author(s). Thus, unless there is explicit evidence that the work was specifically commissioned by the university, the IP rights remain with the author(s) and the university rights are limited to free (no cost) use in teaching, research, extension, etc. in perpetuity.

In the second group, the strong presumption of ownership is to the university (with the originator having a right to share in the benefits derived therefrom). Thus unless there is convincing and explicit evidence that the IP was developed without the use of university resources and/or facilities (which may include but is not limited to any of the following: use of equipment, lab or office space, university time of originator and/or personnel under his/her control, funds supplied by the university and/or funds originating from sponsored research projects and/or donations to university/affiliated companies, etc.) ownership of the IP rests with the university and the originator(s) are obliged to sign the appropriate legal assignment documents upon request.

Within the above general guidelines, the following situations are more specifically defined:

1. Sponsor Rights: In the case in which an IP is generated as a result of research funded by a private sector company under a sponsored research project, the IP rights of the sponsor as defined in the applicable clauses ("Patents & Copyrights," "Intellectual Properties," "Inventions," etc.) of the Sponsored Research Agreement (as approved by the Associate Provost for Research and signed by an authorized officer of the university) shall take precedence over the rights of the university/inventor(s). Any residual rights not accruing to the sponsor shall be as defined in the general guidelines above.
2. Federal Agency Rights: Research projects sponsored by an agency of the federal

government have statutory IP rights that are limited (in almost all cases) to a non-exclusive non-transferrable royalty-free license to any patent generated by the research, provided the inventor(s)/university advise the agency in a timely manner of their intent to retain their rights and provide for legal protection (i.e. patenting). It is the responsibility of the researcher to advise the agency of the creation of the IP and (with the assistance of the university IP manager) advise of the protection steps being undertaken. The residual rights not belonging to the sponsoring agency shall be as defined in the general guidelines above.

3. Student Ownership: Ownership of IPs developed by students who are also employees of the university will be determined by the rules which apply to all university employees. IPs generated by students not employed by the university and not using university resources of at least \$10,000 in their generation will be owned by the student but subject to any applicable prior rights of private sector or government sponsors and to the right of the university to use the IP internally at no cost.
4. Joint Inventorship: For IPs generated by a team of inventors in which one or more are not members of the faculty/staff/supported students, each inventor is usually entitled (by law) to shared ownership of the entire right. The university's claim to the shares of university-associated inventors will be as outlined in these guidelines. Ownership of outside inventors will vest in them or their assignees.
5. Special Situations: In the event that an IP ownership situation arises which is not addressed in either the general or specific guidelines outlined above, the IPC shall make a recommendation based on the spirit of the guidelines. A record of the rationale used to arrive at their recommendation shall be kept and used as a precedent for the handling of future special situations if applicable.

B. Obligation to Disclose

While it is recognized that faculty mission and expertise is concentrated and directed in areas other than commercial utilization, originators of new technology are strongly encouraged to err on the side of submitting a disclosure when doubt as to its commercial potential exists in their mind. Timely (i.e., before publication or other enabling non-confidential disclosure) submission of a disclosure to the university may also be critical to the value of the IP and is strongly encouraged.

To the extent (and as soon as) the researcher/inventor/creator obtains research results that may be considered an IP and recognizes that they may have potential for commercial utilization there exists an obligation to bring these results to the attention of the university in the form of a disclosure.

If, in the absence of a timely disclosure, commercial utilization of a technology takes place with the direct or indirect involvement of the originator(s) but without involvement by the university it will be deemed that the originator(s) have not fulfilled their obligation to disclose and the university may:

1. Take whatever legal and/or business action is indicated to protect its rights and rightful share of financial benefits.
2. Deny to originator(s) any share of revenues which would otherwise accrue to them under this policy.

C. Revenue Sharing

Revenues generated by the successful commercialization of IPs owned by the university (whether or not protected by patent and/or copyright) shall be shared equally between the university and the originator(s) of the IP, subject to the conditions and exceptions outlined below.

1. Revenues subject to sharing include royalties, licensing fees, incentives, etc. received by the assignee licensor organization, less the costs/expenses described below. Specifically

excepted from sharing are payments received and designated for specific purposes such as sponsored or unrestricted research grants, services to the university, research equipment and/or materials, consulting fees to researchers, etc. These payments will go directly to the designated entity and purpose.

2. Also excepted from sharing are revenues resulting from:
 - a. Tasks and/or activities specifically and explicitly assigned to employees by an administrative unit of the university, or
 - b. Activities and/or tasks clearly defined in the written, university approved, policy of an administrative unit of the university.
- Such revenues, flowing through the university assignee organization, will accrue to the originating administrative unit of the university net of development costs.
3. Expenses to be subtracted from gross revenue before sharing shall be limited to documented direct and indirect costs for protection (patenting), marketing and development of the IP. Specifically excluded are costs incurred in the generation of the IP (i.e. research costs). Development costs shall include (but not be limited to) payments made to (or retained by) non-affiliated organizations (e.g. Research Corp. Technologies, CIT, etc.) involved in the process of commercializing the IPs owned by the university.
4. Non-cash compensation for rights to an IP may be accepted but only with the informed consent of the originator(s) of the IP.
5. The share of net revenue not paid to the originator(s) (50 percent) shall be applied as follows:
 - a. A portion equivalent to at least 10 percent of total net revenue may be distributed to the originator(s)' primary unit(s) (e.g. Departments, Centers, etc.).
 - b. The remainder to the university assignee organization (VTIP).

D. Management Responsibility

Virginia Tech Intellectual Properties, Inc. (VTIP), a non-profit corporation affiliated with the university has been established and charged with the mission of protecting and utilizing IPs for the benefit of the university.

All IPs assigned to the university shall flow to VTIP by assignment for operational management. The IPC (through its Evaluation Coordination Board) should make appropriate inputs and recommendations as to disposition and priority of individual IPs. Originator(s)' inputs/suggestions to VTIP are also appreciated.

E. Right Of Appeal

The originator(s) of an IP covered by this Policy shall have the right to appeal application of the policy to the IPC.

The IPC will formulate recommendations relative to each such appeal, and will forward both the appeal and its recommendations to the Office of the Senior Vice President and Provost in a timely manner. The Provost will determine the university's response to each appeal, and will so notify the originator(s) and the IPC.

If the originator(s) disagree with the IPC recommendation regarding ownership, a written appeal to the Provost must be filed within (30) thirty days of receipt of notification of the IPC recommendation. This appeal should contain an exposition of the facts as seen by the originator(s), any information they deem pertinent to the case, as well as any applicable citations of policy guidelines. A copy of the appeal document should be sent to the IPC via its Chair.

Upon receipt of the appeal, the Provost may elect to consult with any and all concerned prior to

reaching a decision in the case.

In the event that any member of the university (faculty, staff or student) perceives and/or becomes aware of any irregularity in the inventorship/authorship of an IP disclosed (or about to be disclosed) to the IPC he/she should bring it to the attention of the other inventors/authors involved and/or the Department Chair(s) concerned in an attempt to resolve the conflict equitably and amicably. Failing such resolution, the facts of the cases should be submitted in writing within (30) thirty days to the Vice Provost for Research and Dean of the Graduate School (with copy to the Chair of the IPC) with a request for review by the Inventorship Review Group of the IPC.

Upon receipt of such a request, the IRG shall review the facts of the case, convene a hearing for all concerned parties, reach a conclusion and present a synopsis of the case and a recommendation to the full IPC who will, in turn, make a recommendation to the Provost.

3. Procedures

4. Definitions

5. References

Policy Memorandum No. 73, "Policy on Intellectual Properties," issued March 4, 1987.

Policy Memorandum No. 121, "Policy on Intellectual Properties," issued December 9, 1991.

6. Approval and Revisions

- Revision 0

Approved by University Council, November 17, 1986.

Approved by the President, November 17, 1986.

Approved by Board of Visitors, December 5, 1986.

- Revision 1

Approved by University Council, December 2, 1991.

Approved by the President, December 2, 1991.

- Revision 2

August 31, 1999. Revised membership titles to reflect changes in titles, responsibilities, and University Council By-laws.